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| Logo**Good Shepherd Lutheran College**  **Assessment Task**  **Cover Sheet** | | |
| ***DETAILS*** | | |
| ***Title:*** *“Best Buy”* | | |
| ***Teacher:*** *Sajtos, Pushpa & Soopramanian* | ***Student Name:*** | ***Class:*** *Year 8* |
| ***Date set:*** *15/16.03.2012* | ***Due date:*** *22/23.03.2012* | |
| ***PURPOSE & BACKGROUND OF AS SESSMENT TASK*** | | |
| Students have had the opportunity in class to explore the concepts of ratio and rates. As an extension to this they *are required to investigate the costs of items and compare these as prices per unit of measure.* | | |
| ***DESCRIPTION OF ASSESSMENT TASK*** | | |
| Form groups of no more than four students for this activity.  Although you will be working as a group, each member of the group needs to submit an individually completed copy of the assignment.  Work through the instructions attached and make sure to show all your working out and solutions.  Work must be presented in a neat and ordered way. | | |
| ***ASSESSMENT CRITERIA*** | | |
| |  |  | | --- | --- | | Criterion B |  | | Criterion D |  | | | |

**Price Overview**

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| Coles | Woolworths |
| [Coles Milk Full Cream Bottle 3L Milk Full Cream Bottle 3L](https://www.colesonline.com.au/webapp/wcs/stores/servlet/ProductDisplay?catalogId=16551&storeId=17552&productId=5113679&langId=-1&categoryId=372254&parent_category_rn=372252&useropt=browse&shopTabCategoryId=)  **$3.00** | [Woolworths Milk Lite Bottle 3L](javascript:productList.showProduct('845524441781761');)  [Milk Lite Bottle 3L](javascript:productList.showProduct('845524441781761');)  **$3.00** |
| [Coles Milk Full Cream Carton 1L Milk Full Cream Carton 1L](https://www.colesonline.com.au/webapp/wcs/stores/servlet/ProductDisplay?catalogId=16551&storeId=17552&productId=5134951&langId=-1&categoryId=372254&parent_category_rn=372252&useropt=browse&shopTabCategoryId=)  **$1.25** | [Woolworths Cream Thickened 600ml](javascript:productList.showProduct('845524441766205');)  [Cream 600ml](javascript:productList.showProduct('845524441766205');)  **$2.25** |
| [Coles Milk Lite Bottle 2L Coles Milk Lite Bottle 2L](https://www.colesonline.com.au/webapp/wcs/stores/servlet/ProductDisplay?catalogId=16551&storeId=17552&productId=5113627&langId=-1&categoryId=372254&parent_category_rn=372252&useropt=browse&shopTabCategoryId=)  **$2.50** | [Woolworths Milk Lite Carton 1L Milk Lite Carton 1L](javascript:productList.showProduct('845524441782802');)  **$1.50** |
| [Pura Cream Thickened 300mL Pura Cream Thickened 300mL](https://www.colesonline.com.au/webapp/wcs/stores/servlet/ProductDisplay?catalogId=16551&storeId=17552&productId=120473&langId=-1&categoryId=382625&parent_category_rn=382623&useropt=browse&shopTabCategoryId=)  **$3.01** | [Homebrand Ice Cream Vanilla 2L](javascript:productList.showProduct('845524441768830');)  Ice Cream Vanilla 2L **$4.24** |
| [Mars M&Ms Milk Chocolate 200g M&Ms Milk Chocolate 200g](https://www.colesonline.com.au/webapp/wcs/stores/servlet/ProductDisplay?catalogId=16551&storeId=17552&productId=13377&langId=-1&categoryId=375064&parent_category_rn=373934&useropt=browse&shopTabCategoryId=)  **$4.24** | [Nesquik Chocolate 500gNesquik Chocolate 500g](javascript:productList.showProduct('845524441777113');)  **$5.59** |
| [Coles Smart Buy Ice Cream Vanilla 2L Ice Cream Vanilla 2L](https://www.colesonline.com.au/webapp/wcs/stores/servlet/ProductDisplay?catalogId=16551&storeId=17552&productId=28221&langId=-1&categoryId=382611&parent_category_rn=373428&useropt=browse&shopTabCategoryId=)  **$4.41** | [Pura Cream Thickened 300ml](javascript:productList.showProduct('845524441784770');)  [Pura Cream Thickened 300ml](javascript:productList.showProduct('845524441784770');)  **$2.74** |
| [Nestle Peters Orginal Ice Cream Neapolitan 2L](https://www.colesonline.com.au/webapp/wcs/stores/servlet/ProductDisplay?catalogId=16551&storeId=17552&productId=123161&langId=-1&categoryId=382611&parent_category_rn=373428&useropt=browse&shopTabCategoryId=)  [Nestle Peters Ice Cream Neapolitan 2L](https://www.colesonline.com.au/webapp/wcs/stores/servlet/ProductDisplay?catalogId=16551&storeId=17552&productId=123161&langId=-1&categoryId=382611&parent_category_rn=373428&useropt=browse&shopTabCategoryId=)  **$6.27** | [Mars M&ms Milk Chocolate 200g](javascript:productList.showProduct('845524441794822');)  M&Ms Milk Chocolate 200g **$4.28** |
| [Nesquik Chocolate 500g](https://www.colesonline.com.au/webapp/wcs/stores/servlet/ProductDisplay?catalogId=16551&storeId=17552&productId=122867&langId=-1&categoryId=&parent_category_rn=&useropt=browse&shopTabCategoryId=&sourcePage=SITE_SEARCH)  [Nesquik Chocolate 500g](https://www.colesonline.com.au/webapp/wcs/stores/servlet/ProductDisplay?catalogId=16551&storeId=17552&productId=122867&langId=-1&categoryId=&parent_category_rn=&useropt=browse&shopTabCategoryId=&sourcePage=SITE_SEARCH)  **$5.54** | [Nestle Chocolate Alpen Blend 250g](javascript:productList.showProduct('845524441781517');) [Nestle Drinking Chocolate250g](javascript:productList.showProduct('845524441781517');)  **$2.99** |
| [Nestle Alpen Blend Drinking Chocolate 250g](https://www.colesonline.com.au/webapp/wcs/stores/servlet/ProductDisplay?catalogId=16551&storeId=17552&productId=124479&langId=-1&categoryId=&parent_category_rn=&useropt=browse&shopTabCategoryId=&sourcePage=SITE_SEARCH)  Nestle Drinking Chocolate 250g **$3.35** | [Nestle Peters Orginal Ice Cream Neapolitan 2L](https://www.colesonline.com.au/webapp/wcs/stores/servlet/ProductDisplay?catalogId=16551&storeId=17552&productId=123161&langId=-1&categoryId=382611&parent_category_rn=373428&useropt=browse&shopTabCategoryId=)  [Nestle Peters Ice Cream Neapolitan 2L](https://www.colesonline.com.au/webapp/wcs/stores/servlet/ProductDisplay?catalogId=16551&storeId=17552&productId=123161&langId=-1&categoryId=382611&parent_category_rn=373428&useropt=browse&shopTabCategoryId=)  **$6.27** |

**Part A**

You and your friends want to make a milkshake. Before you start you need to read the recipe to see what you will require.

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|  | Done |
| 1. Read the recipe and take notes of the ingredients and quantities you will need |  |
| 2. Write a shopping list |  |
| 3. Use the provided price overview to compare prices between Woolworths and Coles. To do this you will need to chance prices into unit prices (100g/ml) *(Show all of your working out and present prices in the table provided below)* |  |
| 4. Calculate how much the 5 items would cost you in total at each store and state in full sentence which shop is cheaper and by how much. |  |
| 5. Depending on where you live, would it make sense for you to buy the items at the cheaper store? *(Explain in full sentences)* |  |
| 6. The given recipe is for 4 people. How much of each ingredient would you need if you wanted to change the recipe to make enough for 7 people? *(Show all of your working out)* |  |

**1. Milkshake Recipe (for 4 serves)**

* 1.4 L milk
* 500 ml of ice-cream
* 250g M&M’s
* 200g of cocoa
* 250 ml cream

**2. Shopping list:**

**3. Calculation of prices per 100g/ml (you can use the working out page at the end of this booklet):**

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|  | **Woolworths** | **Coles** |
| 100ml of milk | $ | $ |
| 100ml of cream | $ | $ |
| 100ml of ice cream | $ | $ |
| 100g of M&M’s | $ | $ |
| 100g of cocoa | $ | $ |

**4. Comparison of total cost:**

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**5. Where to shop? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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**Part B**

Calculate the amount of milk needed for at least 3 different amount of serves (e.g. 6, 8 and 10). Next calculate the costs involved if you were to buy your milk in 1l, 2l or 3l bottles. Compare the results and create a line graph based on these. Make predictions on prices per serve and explain why you chose the number of serves.

**Part C**

1. Explain in full sentences how the skills learnt in this Investigation might help you in your life outside of school.

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2. Looking at your results in Part A for question 3 and 4, do you think your results are correct/wrong? Do they make sense? Explain in full sentences.

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3. Considering all elements of the process of completing this task, what would you change if you were to complete this task again?

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|  | **Criteria B: Investigating Patterns** | | | **Criteria D: Reflection in Mathematics** | | |
| **7-8** | The student **selects and applies basic** mathematical problem-solving techniques by asking searching questions to recognize patterns in different situations, **describes** simple patternsas relationships or general rules. The student arrives at a single result or set of results and **makes predications** consistent with findings, and **explains simple** mathematical relationships and general rules using **logical arguments**. | In Part B you have selected a variety of amounts of serves that give you a good spread of data, have presented your findings in a well presented line graph, made predications based on your graph and justified in detail your choices. |  |  | | |
| **5-6** | The student **selects and applies basic** mathematical problem-solving techniques by asking searching questions to recognize patterns in different situations, **describes** simple patternsas relationships or general rules.The student **explains simple** mathematical relationships and general rules using **logical arguments**. | In Part B you have selected a variety of amounts of serves that give you a good spread of data, have presented your findings in a well presented line graph, made predications based on your graph and tried to justify your choices. |  | **D1** The student **describes** the reasonableness of their results in the context of the problem and **attempts to explain** whether they make sense. | In Part C Q2 you have described if your results are correct and explained if they make sense |  |
| **D2** The student **describes** of the importance of their findings in connection to real life where appropriate. | In Part A Q5 and Part C Q1 you have explained how you can apply the skills learnt, in real life in great detail |  |
| **D3 T**he student **considers** the degree of accuracy of their results where appropriate and estimates errors in simple measurements. | In Part C Q2 you have stated if your results are correct and given reason |  |
| **D4** The student considers improvements to their method where appropriate. | In Part C Q3 you have explained in detail how you could improve your work if you were to do the investigation again |  |
| **3-4** | The student **selects and applies basic** mathematical problem-solving techniques by asking questions to recognize patterns in different situations, **and suggests** simple patternsas relationships or general rules. | In Part B you have selected a variety of amounts of serves, have presented your findings in a line graph and tried to make predications based on your graph. |  | **D1** The student **states**  the reasonableness of their results in the context of the problem and **attempts explain** whether they make sense. | In Part C Q2 you have described if your results are correct and attempted to explain if they make sense |  |
| **D2** The student **states the importance** of his or her findings in connection to real life where appropriate. | In Part A Q5 and Part C Q1 you have explained how you can apply the skills learnt, in real life in some detail |  |
| **D3** The student **attempts to consider** the degree of accuracy of his or her results where appropriate and estimates errors in simple measurements. | In Part C Q2 you have stated if your results are correct and attempted to given reason |  |
| **D4** | |  |
| **1-2** | The student **applies**, **with some guidance**, **basic** mathematical problem-solving techniques by asking questions to recognize simple patterns. | In Part B you have selected a variety of amounts of serves with help, have presented your findings in a line graph and made a statements about the results |  | **D1** The student **states** the reasonableness of their results in the context of the problem. | In Part C Q2 you have described if your results are correct |  |
| **D2** The student **attempts to states** the importance of their findings however **no connection to real life is made.** | In Part A Q5 and Part C Q1 you have tried explained how you can apply the skills learnt, in real life |  |
| **D3** | |  |
| **D4** | |  |
| **0** | The student does not reach a standard described by any of the descriptors above. | |  | The student does not reach a standard described by any of the descriptors above. | |  |

**MYP MATHEMATICS: Modified Assessment Criteria Year 2 & 3**

**Working out**

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